AMENDMENT TO THE CLAIMS

1. (Original) A method of collecting experimental data on a computer system, comprising the steps of:

initializing a container, using configuration information wherein the container includes a plurality of subcontainers;

storing configuration information used for the container in a container database;

repeating steps (a)-(g) for desired sub-containers in the container:

(a) selecting an individual sub-container in the container,

(b) collecting a plurality of image data from the subcontainer,

(c) storing the plurality of image data in an image database,

(d) collecting a plurality of feature data from the image data,

(e) storing the plurality of feature data in a feature database,

(f) calculating a plurality of sub-container summary data using the plurality of image data and the plurality of feature data collected from the sub-container, and

(g) storing the plurality of sub-container summary data in a sub-container database;

calculating a plurality of container summary data using the plurality of sub-container summary data from the sub-container database; and

storing the plurality of container summary data in the container database.

2. (Original) A computer readable medium having stored therein instructions for causing a central processing unit to execute the method of claim 1.

3. (Original) The method of claim 1 wherein the plurality of subcontainers include a plurality of cells treated with an experimental compound.

4. (Original) The method of claim 1 wherein the container includes a microplate, and the plurality of sub-containers includes wells in a microplate.

5. (Original) The method of claim 1 wherein the container database includes microplate data, the sub-container database includes well data, the image database includes photographic image data and the feature database includes cell feature data.

6. (Original) The method of claim 1 wherein the step of collecting a plurality of feature data from the image data includes collecting any of: size, shape, intensity, texture, location, area, perimeter, shape factor, equivalent diameter, length, width, integrated fluorescence intensity, mean fluorescence intensity, variance, skewness, kurtosis, minimum fluorescence intensity, maximum fluorescence intensity, geometric center, an X-coordinate of a geometric center or a Y-coordinate of a geometric center for cells.

7. (Original) The method of claim 1 wherein the step of calculating a plurality of sub-container summary data includes calculating any of: sizes, shapes, intensities, textures, locations, nucleus area, spot count, aggregate spot area, average spot area, minimum spot area, maximum spot area, aggregate spot intensity, average spot intensity, minimum spot intensit intensity, maximum spot intensity, normalized average spot intensity, normalized spot count, number of nuclei, nucleus aggregate intensity dye area, dye aggregate intensity, nucleus

intensity, cytoplasm intensity, difference between nucleus intensity and cytoplasm intensity, nucleus area, cell count, nucleus box-fill ration, nucleus perimeter squared area or nucleus height/width ratio.

8. (Original) The method of claim 1 wherein the step of calculating a plurality of container summary data includes calculating any of: mean size, mean shape, mean intensity, mean texture, locations of cells, number of cells, number of valid fields, standard deviation of nucleus area, mean spot count, standard deviation of spot count, mean aggregate spot area, standard deviation of aggregate spot area, mean average spot area, standard deviation of average spot area, mean nucleus area, mean nucleus aggregate intensity, standard deviation of nucleus intensity, mean dye area, standard deviation of dye area, mean dye aggregate intensity, standard deviation of aggregate dye intensity, mean of minimum spot area, standard deviation of minimum spot area, mean of maximum spot area, standard deviation of maximum spot area, mean aggregate spot intensity, standard deviation of aggregate spot intensity, mean average spot intensity, nuclei intensities, cytoplasm intensities, difference between nuclei intensities and cytoplasm intensities, nuclei areas, nuclei box-fill ratios, nuclei perimeter squared areas, nucleus height/width ratios, well cell counts.

9. (Original) The method of claim 1 wherein the container includes a bio-chip and the plurality of sub-containers include selected micro-gels on the bio-chip.

10. (Original) The method of claim 1 further comprising:

storing the container database data and the sub-container database data in a second database on a shared database;

storing the image database and the feature database data in a plurality of third databases on a shared database file server; and

creating links in a first database to the second database and the plurality of third databases, wherein the first database includes links to the second database and the plurality of third databases but does not include any data collected from the container, and wherein the first database is used by a display application to view data collected from a container.

11. (Original) The method of claim 10 wherein the shared database includes faster access local storage.

12. (Original) The method of claim 10 wherein the shared database file server includes slower access remote storage.

13-50. (Cancelled)